WHAT IS CLAIMED IS:

1. A method for the treatment of overproduction of mucin in a mammal, comprising:

administering an inhibitor of p38 MAP kinase to the mammal in an amount sufficient to reduce mucin production

2. The method of Claim 1 wherein the overproduction of mucin is caused by an otitis media (OM) infection or chronic obstructive pulmonary disease (COPD).

3. The method of Claim 2 wherein the OM or COPD is caused by nontypeable *Haemophilus influenzae* (NTHi).

4. The method of Claim 1 wherein said inhibitor of p38 MAP kinase is a chemical inhibitor selected from the group consisting of: pyridimylimidzol SB203580, SB202190, SB220025, SC68376, SKF-86002, a dominant-negative mutant of p38α, and a dominant-negative mutant of p38β.

5. The method of Claim 1 wherein the inhibitor of p38 MAP kinase is an antisense oligonucleotide.

6. The method of Claim 1 wherein the inhibitor of p38 MAP kinase is a vector which expresses a protein or polypeptide which inhibits p38 MAP kinase.

7. The method of Claim 1 wherein the method of administration is selected from the group consisting of: inhalation, ear drops, transtympanically, intramuscularly, intravenously, and by mouth.

8. A method for the identification of regulators of mucin production, comprising:

providing a reporter vector containing the MUC5AC or p38 MAP kinase promoter;

contacting the reporter vector with a potential regulator; and

identifying the up-or down-regulation of the reporter gene.

9. The method of Claim 8, wherein said potential regulator is selected from the group consisting of: a polypeptide, an polynucleotide, and a small molecule.

10. The method of Claim 8, wherein said potential regulator is a mixture of proteins from a cell.

11. The method of Claim 8, wherein said potential regulator is an antisense polynucleotide.

12. The method of Claim 8, wherein said potential regulator is a library of small molecules.

13. A method for the treatment of overproduction of mucin in a mammal, comprising:

administering an activator of PI-3 kinase to the mammal in an amount sufficient to reduce mucin production.

14. The method of Claim 13 wherein the overproduction of mucin is caused by a disease selected from the group consisting of: Otitis media, chronic obstructive pulmonary disease, asthma, and cystic fibrosis.

15. The method of Claim 14, wherein said overproduction of mucin is caused by otitis media (OM) infection or chronic obstructive pulmonary disease (COPD).

16. The method of Claim 14 wherein the OM or COPD is cause by nontypeable *Haemophilus influenzae* (NTHi).

17. The method of Claim 13 wherein said activator of PI-3 kinase is a protein selected from the group consisting of: a dominant negative mutant of PI-3 kinase, a constitutively active form of p110 (p110-CAAX), wildtype Akt.

18. The method of Claim 13 wherein the inhibitor of p38 MAP kinase is an antisense oligonucleotide.

19. The method of Claim 13 wherein the inhibitor of PI-3 kinase is a vector which expresses a protein or polypeptide which activates PI-3 kinase.

20. The method of Claim 13 wherein the method of administration is selected from the group consisting of: inhalation, ear drops transtympanically, intramuscularly, intravenously, and by mouth.